

Five years on: perioperative fasting in elective paediatric population

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Introduction: Over the last decade there has been a significant change in recommended practices of pre-operative fasting instructions for the elective paediatric population. The detrimental effects of prolonged fasting include hypoglycaemia, vomiting, dehydration and distress.¹ Substantial body of data characterised gastric emptying and the risk of gastric reflux intraoperatively, and this evidence has led to an internationally endorsed recommendation to reduce pre-operative clear fluid fasting to 1 hour in children, as long as there is no specific contraindication.^{1,2} Before this guideline was published, various reports had demonstrated that the actual pre-operative fasting times far exceeded the recommendation.³

Aim: Determine how well these guidelines are adhered to in our local pre-operative paediatric population, five years after their first publication.

Methods: Queen's hospital is a large district general hospital with regular elective paediatric lists for ASA 1 and 2 patients. Our sample population was children (aged up to 18 years old) attending for elective surgery over a period of one month. The data were collected using a paper-based questionnaire. The questionnaire was completed either by the anaesthetist or the nursing staff on the day.

Results: We assessed a total of 32 children, aged 22 months to 15 years (mean 7.7 years). We found that the mean fasting time for clear fluids was 7.6 hrs, ranging from 2 hrs 30 mins to 13 hrs 30 mins. The mean fasting time for food was 12.8 hrs, ranging from 5 hrs 30 mins to 15 hours. There were no reported adverse events, and there was no clear association between a child's age and fasting duration. no clear association with self-reported thirst was found.

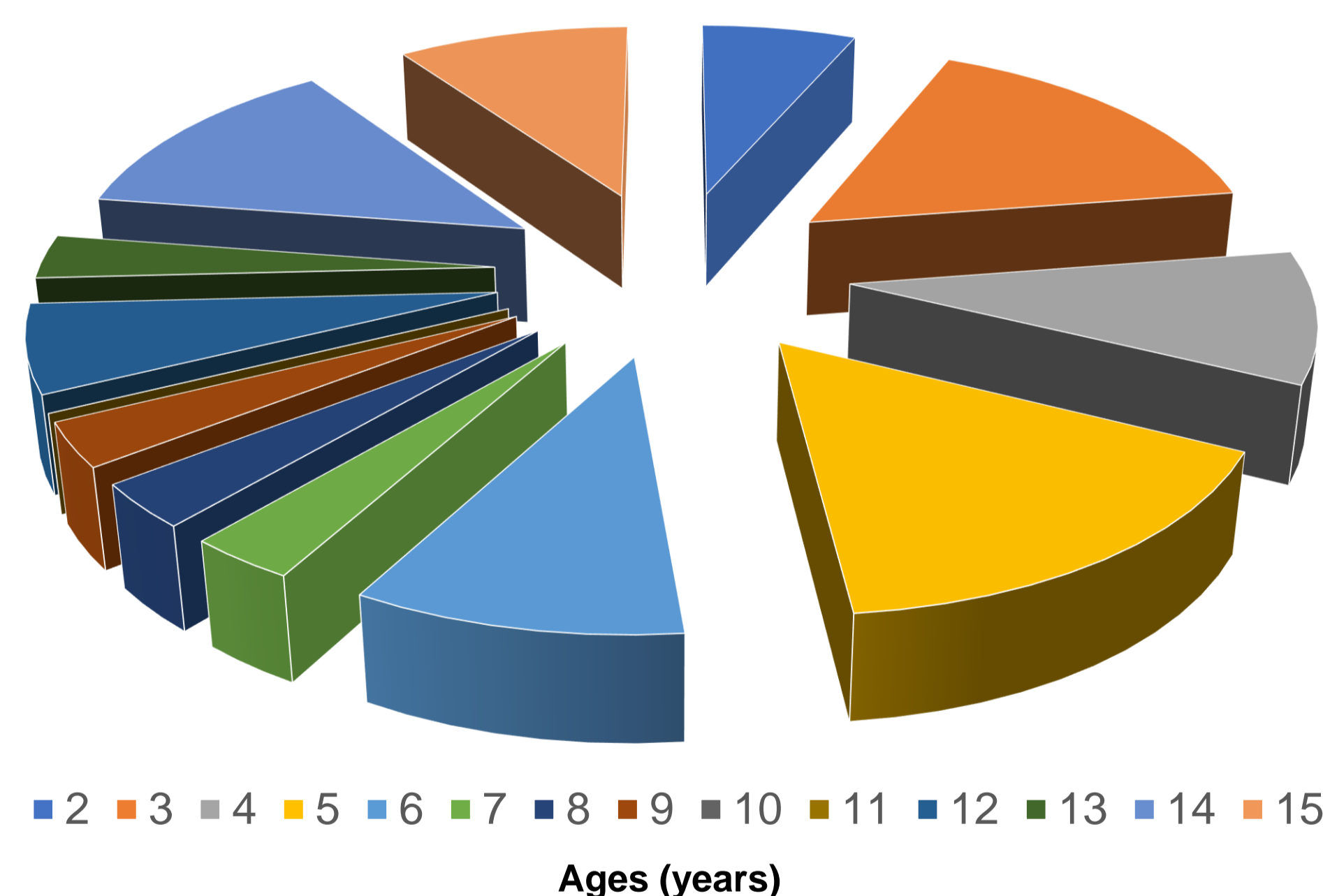


Figure 1. Percent frequencies of ages (rounded) in our population sample

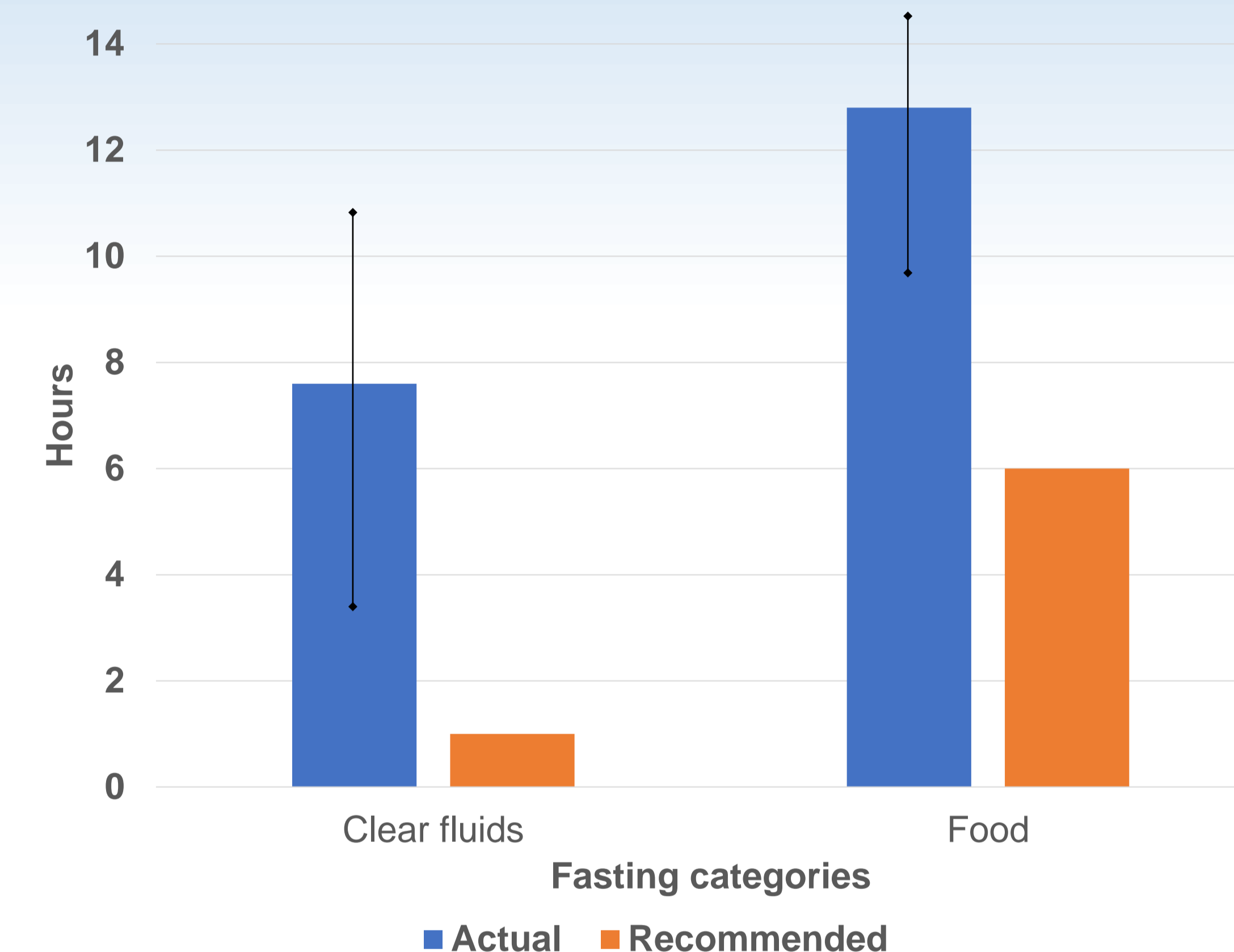


Figure 2. Actual and recommended fasting times for clear fluids and food (Error bars demonstrate standard deviation)

Conclusion: all children in our sample population had excessive clear fluids fasting despite clear existing recommendations. As a result, we have changed our local policy on the pre-operative surgical ward to actively offer a drink of water or oral rehydration solution at 3ml/kg/hr up to an hour before coming to theatre. We are hoping to address excessive fasting for food by providing clear written pre-operative guidance to the patients. Our study has demonstrated the importance of auditing local trends in pre-operative fasting in children in order to make departmental policy changes to mitigate excessive fasting and its associated potential harm.

References

1 Frykholm P et al. Pre-operative fasting in children. A guideline from the European Society of Anaesthesiology and Intensive Care. Eur J Anaesthesiol 2022; 39:4–25

2 Thomas M, Morrison C, Newton R, Schindler E. Consensus statement on clear fluids fasting for elective pediatric general anesthesia. Pediatr Anesth 2018;00:1-4

3 Williams C, Johnson PA, Guzzetta CE, et al. Pediatric fasting times before surgical and radiologic procedures: benchmarking institutional practices against national standards. J Pediatr Nurs 2014; 29:258–267